

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al (5,739,650).

With respect to claim 13, Kimura teaches an operating specifications evaluation step (column 5, lines 13-67) in which a driving device for identifying a motor constant (column 4, lines 11-17) of a permanent magnet motor (fig. 7, 703) is provided to a user of a compressor (column 1, line 65) with having said permanent magnet motor, and said driving device drives said permanent magnet motor installed therein said compressor to extract a motor constant of said permanent magnet motor including a counter-electromotive voltage constant (column 3, lines 65-66); an efficiency monitoring (column 8, lines 1-40) step in which the efficiency of a product is monitored based on variation in said motor constant of said permanent magnet motor (column 4, lines 41-46) obtained in said operating specifications evaluation step, said compressor with said permanent magnet motor being installed in said product; and an efficiency reduction reporting step (column 8, lines 65-67; column 9, lines 1-12) in which an efficiency improvement measure including such as the timing (fig. 20, SP5-6) of exchanging said compressor is

reported by an indicator, when the efficiency of said product obtained in said efficiency monitoring step is reduced.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al (5,739,650).

With respect to claim 14, Kimura does not teach wherein the reduction in the efficiency includes a lamp. It would have been obvious to one having ordinary skill in the art at the time of the invention to implement a lamp/light when monitoring reading drops below a minimum which is recognized as part of the ordinary capabilities of one skilled in the art.

With respect to claim 21, Kimura teaches a freezing/air conditioning (column, 1, lines 65) device comprising: a permanent magnet motor (fig. 7, 703) operated at variable speed by an inverter (fig. 7, 702) having an automatic tuning function (column 6, lines 10-15) or a program of the inverter, the inverter being able to identify a motor constant (column 4, lines 11-17) of a motor; a compressor driven by said permanent magnet motor, for discharging a refrigerant circulating through a refrigeration cycle; and a monitor device for monitoring performance such as the range of output (fig. 20, SP8)

or reduction in efficiency by determining said motor constant identified during operation. Kimura does not teach wherein the reduction in the efficiency is reported by an alarm. It would have been obvious to one having ordinary skill in the art at the time of the invention to implement an alarm when monitoring reading drops below a minimum which is recognized as part of the ordinary capabilities of one skilled in the art.

Claims 1, 2, 5-11, 15-20, and 22-24 are allowable.

Response to Arguments

Applicant's arguments filed 9/01/09 have been fully considered but they are not persuasive.

Applicant's first argument is that Kimura fails to disclose "an efficiency monitoring step" with respect to claim 13. The examiner respectfully disagrees, Kimura teaches an efficiency monitoring step (column 8, lines 1-40). Efficiency is measured (fig. 2, 12, and 17) and can be arbitrary set by the control means (column 8, lines 41-67, column 9, lines 1-12).

The applicant's second argument is that Kimura fails to correlate how "an efficiency monitoring step in which the efficiency of a product is monitored based on variation in said motor constant of said permanent magnet motor obtained in said operating specifications evaluation step" (column 4, lines 1-17; column 8, lines 41-67; column 9, lines 1-12), with respect to claim 13. The examiner respectfully disagrees, motor constants are used along with the other measurements (current, voltage, load, speed) in the determination of the torque, and efficiency (column 4, lines 6-10). Peak

efficiency is often a desired outcome, but it speaks of operating at an arbitrary efficiency (column 8, lines 41-67, column 9, lines 1-12).

The applicant's third argument is that Kimura has no evidence of "an efficiency reduction reporting step in which an efficiency improvement measure including such as the timing of exchanging said is reported by an indicator" with respect to claim 13. The examiner respectfully disagrees, the efficiency is monitored (fig. 2, 12, 17), improved (column 20, lines 4-42) and time is indicated (fig. 20, SP5).

The applicant's fourth argument is that Kimura fails to disclose a permanent magnet motor, with respect to claim 21. The examiner respectfully disagrees, Kimura teaches a PM motor (column 4, lines 41-46).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is (571)272-8395. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENTSU RO/
Primary Examiner, Art Unit 2837

/Erick Glass/
Examiner, Art Unit 2837